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DEPARTMENT OF NOTES, REVIEWS, ETC.

It is the purpose, in this department, to present from time to time brief original notes, both of methods of work and of results, by members of the Society. All members are invited to submit such items. In the absence of these there will be given a few brief abstracts of recent work of more general interest to students and teachers. There will be no attempt to make these abstracts exhaustive. They will illustrate progress without attempting to define it, and will thus give to the teacher current illustrations, and to the isolated student suggestions of suitable fields of investigation.—[Editor.]

A PARAFFIN RIBBON CARRIER

The Carrier described below was designed to handle the paraffin ribbon as it comes from the microtome in such a way as to preserve a perfect series and to eliminate some of the difficulties encountered with the usual method. Not only is the old method of cutting long serial sections into short pieces and laying them upon a sheet of paper tedious but the danger of losing a part of the sections in a sudden draft or of having them hopelessly mixed is great. Without careful shielding, ribbons placed upon paper may not be allowed to lie for any length of time before mounting. With the use of the carrier long unbroken series may be wound on the drum and allowed to remain until used. The writer has allowed a ribbon to remain on the carrier for three days exposed to all the drafts common in the average room and at the end of the time was able to mount a perfect series with no difficulty. The inclined plane shown in the photograph greatly facilitates mounting. The ribbon is unwound from the drum onto the plane where it is cut to the desired lengths. The continuous ribbon does away with the bother of piecing bits together as is frequently necessary when mounting from short strips laid on paper.

Directions for Making

Material.

All the materials necessary for making the machine are easily obtained and at slight expense. The wood used was poplar and yellow pine taken from an old packing box. A one pound coffee tin was made to serve as the cylinder or drum.

Dimensions.*Figure 1. A.*

1. The Base. $9 \times 6 \times \frac{1}{2}$ inches. A slot $2\frac{1}{2} \times \frac{1}{4}$ inches (Fig. 2-10) is cut in the center to accommodate the winged nut (9) which fastens the uprights (3) to the base.

2. The Base to which the uprights are fastened. $7 \times 3 \times \frac{1}{4}$ inches. A quarter inch hole is bored in the center of this base to pass the screw of the winged nut through.

3. The Uprights. $9 \times 3 \times \frac{1}{4}$ inches. The width narrows four inches from the bottom to $1\frac{1}{2}$ inches. Slots $1 \times \frac{1}{4}$ inches are cut in the tops of the uprights (Fig. 1,-D) to accommodate the axles of the drum. The uprights were made particularly for the Leitz Base Sledge microtome and, though the height to which they raise the drum works very well with the rotaries, two inches might be cut from their length with advantage.

4. These are pegs that are inserted four and three quarter inches from the base to carry the inclined plane shown in Fig. 2-11.

5. The Axle Support. This is a disc of wood $2 \times \frac{1}{4}$ inches through the center of which a quarter inch walnut axle is thrust. The end of a maple spool is glued to the top of the disc to serve as a bearing (Fig. 1, B-3).

6. The Drum. The lid is soldered onto a one pound coffee tin, the measurements of which are 6×4 inches. The can is covered with blotting paper. This drum will carry about fourteen feet of one-half inch ribbon.

7. The Drum Pulley. $2 \times \frac{1}{4}$ inches and grooved as shown in the diagram. The belt runs from this pulley to one made by fastening the ends of a small spool together and which is secured to the inner face of the driving wheel.

8. The Driving Wheel. $3 \times \frac{1}{4}$ inches. A handle is inserted in one side as shown in the diagram though very little use is found for it.

9. Winged Nut. $\frac{1}{4}$ inch in diameter.

Figure 2.

10. Slot $2\frac{1}{2} \times \frac{1}{4}$ inches in which the bolt of the winged nut

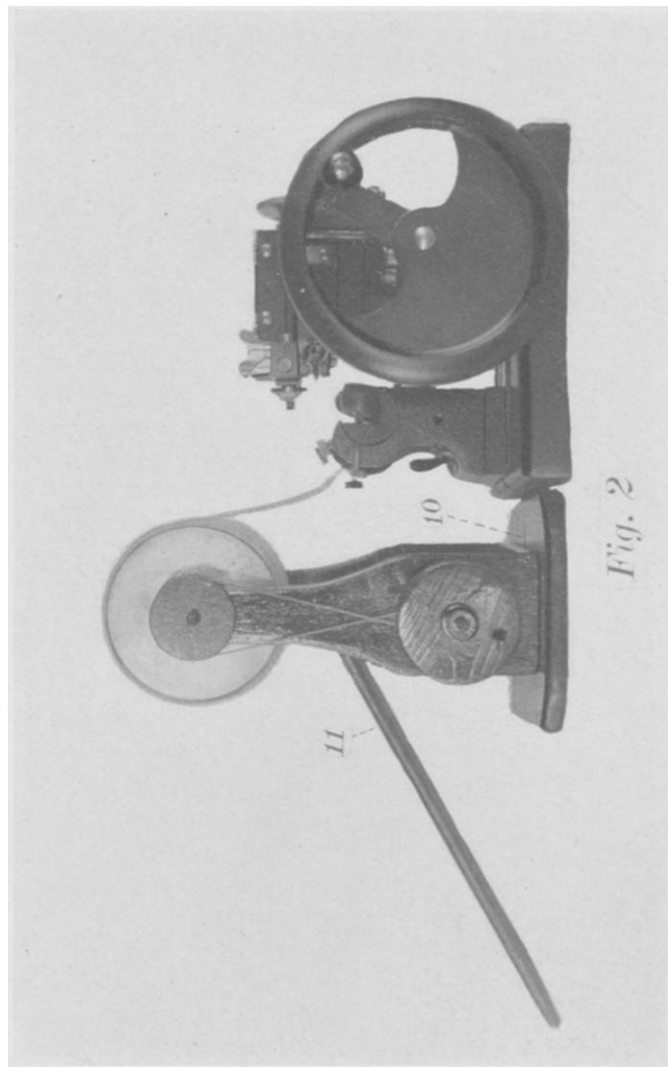


Fig. 2

slides. This allows the adjustment of the drum to meet requirements.

11. Inclined Plane. $12 \times 6\frac{3}{4} \times \frac{1}{4}$ inches. At one end two pegs are placed to engage those shown in Fig. 1,-A4.

General Directions

The only difficulty that will be encountered in the making of the carrier will be to fasten the axle supports squarely in the center of the drum.

Centering the axles may be easily accomplished by drawing a circle the exact size of the drum on a board and then, after determining the center, drill a hole the size of the axle ($\frac{1}{4}$ inch) through it. Insert the axle into this hole (Fig. 1, E). Drive long brads or nails at the periphery of the circle as shown in this figure so as to hold the drum firmly in place when it is lowered. Coat the axle support with glue and press the drum tightly against it. The nails will hold the drum in place and the axle will be in the exact center of the cylinder.

Glue may serve to fasten the axle permanently to the drum but I find that it does not take a very firm hold of the tin and soon breaks away. This may be overcome by first placing small brads or screw eyes (Fig. 1,-B 1) in the sides of the axle supports and then gluing the discs on as directed above. After the glue has set firmly enough to hold the discs in place solder is run in under the screw eyes and they are thus firmly fastened to the tin.

Directions for Using

Cut a ribbon from eight to ten inches in length and press one end lightly against the blotting paper covering the drum. After this the ribbon is wound on the cylinder as it comes from the microtome (shown in Fig. 2) by thumbing the edge of the driving wheel which revolves the drum very slowly (the drum revolves once to every two and a half revolutions of the driving wheel). The winged nut allows the cylinder to be adjusted to the demands of the particular microtome in use. The ribbon is wound spirally upon the drum by sliding the carrier parallel to the knife. When ready to mount the ribbon is unwound onto the inclined plane which is covered with blotting paper and cut to the desired lengths.

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